

DETAILED ACTION

Interview Summary

1. This office action is submitted in response to the telephone interview with Agent Barry Shuman (Reg. # 50220) held on November 24, 2009. Mr. Shuman noted that the “Statutory double patenting rejection” was improper. The Examiner agrees. The rejection should be based on a Non-Statutory Double patenting rejection.

Election/Restrictions

2. Applicant's election without traverse of claims 37-42, 45, 48, 51, 54, 57, 60 in the reply filed on 4/13/09 is acknowledged.

Specification

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re*

Art Unit: 2837

Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims **37, 38, 39, 41, 42, 45, 51, 54, 57 and 60** are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claim **33, 54-59 and 61-64** and of copending Application No. **10/573,331**. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Instant Application SN 10/573238		Application SN 10/573331		
Claim #	Limitation	Claim #	limitation	Comments and explanations
37	<ul style="list-style-type: none"> ▪ Multilayer piezoelectric element comprising a stack ▪ Internal electrodes made of Ag and Pd or Pt connected to external electrodes ▪ External electrodes made of Ag and glass ▪ Internal electrodes: proportion of silver contained in the conductive material of the internal electrode near the junction with the external electrode is higher than the proportion of silver contained in the conductive material of the internal electrode located inside the stack 	33	<ul style="list-style-type: none"> ▪ Multilayer piezoelectric element comprising a stack ▪ Internal electrodes made of Ag and Pd or Pt connected to external electrodes ▪ External electrodes made of Ag and glass ▪ Internal electrodes: proportion of silver contained in the conductive material of the internal electrode near the junction with the external electrode is higher than the proportion of silver contained in the conductive material of the internal electrode located inside the stack ▪ Pd/Pt: M1 (% by weight) ▪ Ag: M2 (% by weight) ▪ $0 < M1 \leq 15$, $85 \leq M2 \leq 100$ and $M1 + M2 = 100$ 	Claim 33 in '331 claims all the elements in claim 37 of the instant application.
38	<ul style="list-style-type: none"> ▪ Proportion of silver contained in the internal electrode becomes higher toward the external electrode 	54	<ul style="list-style-type: none"> ▪ Proportion of silver contained in the internal electrode becomes higher toward the external electrode 	

Art Unit: 2837

39	▪ The proportion of Ag contained in the internal electrode is 85% by weight or higher	33 55	▪ Inherent in the limitation of Pd/Pt: M1 (% by weight) Ag: M2 (% by weight) $0 < M1 \leq 15$, $85 \leq M2 \leq 100$ and $M1 + M2 = 100$. Explicitly claimed in claim 55.	
40	▪ The glass component contained in the external electrode exists in a region not more than 80% in thickness of the external electrode	56	▪ The glass component contained in the external electrode exists in a region not more than 80% in thickness of the external electrode	
41	▪ Glass component contains lead oxide or bismuth oxide	57	▪ Glass component contains lead oxide or bismuth oxide	
42	▪ Electrodes joined by diffusion	58	▪ Electrically conductive material of the internal electrode diffuses into the external electrode.	It should be noted that the non-structural limitations are being given little patentable weight.
45	▪ A glass-rich layer formed on the surface of the external electrode	59	▪ A glass-rich layer formed on the surface of the external electrode	
51	▪ Groove is formed between the end of the internal electrode and the external electrode, the groove being filled with an insulating material, wherein the insulating material has a Young's modulus lower than that of the piezoelectric material.	61	▪ Groove is formed between the end of the internal electrode and the external electrode, the groove being filled with an insulating material, wherein the insulating material has a Young's modulus lower than that of the piezoelectric material.	
54	▪ Electrically conductive assisting member formed from an electrically conductive adhesive containing a metal mesh or a mesh like metal sheet embedded therein on the external surface of the external electrode	62	▪ Electrically conductive assisting member formed from an electrically conductive adhesive containing a metal mesh or a mesh like metal sheet embedded therein on the external surface of the external electrode	
57	▪ The electrically conductive adhesive is polyimide resin having electrically conductive particles dispersed therein	63	▪ The electrically conductive adhesive is polyimide resin having electrically conductive particles dispersed therein	
60	▪ The electrically conductive particles are silver particles	64	▪ The electrically conductive particles are silver particles	

6. Claim 48 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 33 of copending Application No. 10/573331. Although the conflicting claims are not identical, they are not patentably distinct from each other because the Examiner takes Official Notice that it is well known in the art to select the thickness of the electrodes to be smaller than the thickness of the piezoelectric layers that constitute the piezo stack.

Art Unit: 2837

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. SanMartin whose telephone number is (571)272-2018. The examiner can normally be reached on M-Th 9-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on 571-272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. SanMartin/
Primary Examiner, Art Unit 2837

December 2, 2009